REMARKS

Present Status of the Application

The Office Action rejected all presently-pending claims 1-3. Specifically, the Office Action rejected claims 1-3 under 35 U.S.C. 102(b), as being anticipated by Nakamura et al. (U.S. 5,216,693). Applicants have amended claims 1 and 3 to improve clarity. After entry of the foregoing amendments, claims 1-3 remain pending in the present application, and reconsideration of those claims is respectfully requested.

Discussion of Office Action Rejections

The Office Action rejected all presently-pending claims 1-3. Specifically, the Office Action rejected claims 1-3 under 35 U.S.C. 102(b), as being anticipated by Nakamura et al. (U.S. 5,216,693, "Nakamura" hereinafter). Applicants have amended claims 1 and 3 to improve clarity. After entry of the foregoing amendments, claims 1-3 remain pending in the present application, and reconsideration of those claims is respectfully requested. Applicants respectfully traverse the rejections for at least the reasons set forth below.

The present invention is directed to a method of operating a matched filter 10 of a point access memory (PAM) with variable lengths. The matched filter 10 receives a signal from Din and stores a plurality of sample data contained in the received signal respectively into a data storage region having data storage locations R1, R2, R3... etc. The pseudo noise sequence (PN

sequence) are stored in a second region PN(1), PN(2), PN(3)....PN(K) which is a region for storing reference values in the PAM.

The data storage regions comprise data storage blocks 200-220, as shown in FIG. 2A, in which the sample data is stored. The reference value storage region comprises reference value storage blocks 240-260. Each of these storage blocks 240-260 can store a PN of the PN sequence.

In accordance with the method of operation described in the present invention, a first sample data, for example, obtained at a step n+1, is stored in one of the data storage blocks, such as block 200. In a corresponding step n+1 of the PN sequence, a first PN is obtained and is stored in a reference value storage block 242. When a second sample data is obtained at step n+2, it is stored in a data storage block 202 and the first PN is moved to the next reference value storage block; i.e., the first PN is shifted from the reference value storage block 242 to reference value storage block 244 in the corresponding step n+2. This technique is carried out throughout the whole process until the step equal to the length of the data storage region and the reference value storage region is reached. In this step, when the next sample data is obtained and stored in the data storage block 220, the first PN is moved to the storage block of reference value 240.

Therefore, the method utilizes the data storage and reference value storage regions of a matched filter of a PAM. In addition, the method requires only the PN sequence to be shifted corresponding to the sequential storing of the sample data. This leads to a significant reduction in power as only the PN sequence and not the sample data is required to be shifted.

The features are recited in claims 1, and 3. For example, independent claim 3 recites the features as follows:

3. A ***method of operating a matched filter of a point access memory (PAM)*** with variable lengths, the matched filter comprising a first data storage region and a second region for storing reference values, the method comprising:

receiving a signal comprising a plurality of sample data;

storing the sample data sequentially in the first data storage region;

storing a PN sequence in the second region for storing reference values;

shifting the PN sequence in the second region to a position corresponding to the sample data in the first region, when all the sample data is stored in the first data storage region.....

(emphasis added).

Claim 1 also recites the similar features.

Nakamura's patent does not teach a method of operating a matched filter of a point access memory (PAM) with variable lengths. The sample data values and the PN code sequence is not stored by utilizing the data storage region and the reference value storage region of the matched filter in the cited patent.

In addition, the prior art by Nakamura describes that shift register 51 is used to generate PN code (FIG. 12). Also, the patent describes the positive and negative data that has three values with respect to one PN code is stored in a positive/negative data storage portion 8. The data of the positive/negative data storage portion 8 is stored in the shift register 3 when carry signals are generated by a clock generator 7. (FIG. 4, Column 5, lines 38-48). Therefore, the prior art uses shift registers to store and shift the sample data.

Since, the present invention utilizes a PAM to provide a circuit structure by shifting the PN sequence of the corresponding data instead of shifting the sample data as described in the

cited prior art. Therefore, the amount of data shifted in the method of the present invention is much less than the prior art method. Hence, the required power for the shifting the data is reduced.

Therefore, the method of correlating PN code sequence with the received sample data, using a PAM, of the present invention, is different and not like the reference taught by Nakamura.

For at least the foregoing reasons, Applicant respectfully submits that independent claims 1 and 3 patently define over the prior art reference, and should be allowed. For at least the same reasons, dependent claim 2 patently define over the prior art as well.

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CONCLUSION

For at least the foregoing reasons, it is believed that the pending claims 1, 2, 3 are in proper condition for allowance. If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

Respectfully submitted,
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